AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 103, line 24 with the following new paragraph:

— As above, the circuit boards were removed from the foil-lined bags and immersed in a 10% sulfuric acid solution for 30 seconds. Following the sulfuric acid treatment, the boards were immersed in two Milli-Q water baths for 1 minute each. The boards were then dried under a stream of nitrogen. The boards were placed on a X-Y table in a humidity chamber and a 30 nanoliter drop of DNA deposition solution was placed on each of the 14 electrodes. The DNA deposition solution consisted of 33 uM thiolated DNA, 33 uM 2-unit phenylacetylene wire (H6), and 16 uM undec-1-en-11yltri(ethylene glycol)($HS-CH_2)_{11}$-$(OCH_2CH_2)_3$-OH) in 6x SSC (900 mM sodium chloride, 90 mM sodium Citrate, pH 7) w/1% Triethylamine. 3 electrodes were spotted with a solution containing DNA 1 (5'-ACCATGGACACAGAT$(CH_2)_{16}$SH-3') (SEQ ID NO:1). 4 electrodes were spotted with a solution containing DNA 2 (5'TCATTGATGGTCTCTTTTAACA($(CH_2)_{16}$SH-3') (SEQ ID NO:2). 4 electrodes were spotted with DNA 3 (5'CACAGTGGGGGGACATCAAGCAGCCATGCAAA$(CH_2)_{16}$SH-3') (SEQ ID NO:3). 3 electrodes were spotted with DNA 4 (5'-TGTGCAGTTGACGTGGAT$(CH_2)_{16}$SH-3') (SEQ ID NO:4). The deposition solution was allowed to incubate at room temperature for 5 minutes and then the drop was removed by rinsing in a Milli-Q water bath. The boards were immersed in a 45°C bath of M44 in acetonitrile. After 30 minutes, the boards were removed and immersed in an acetonitrile bath for 30 seconds followed by a milli-Q water bath for 30 seconds. The

boards were dried under a stream of nitrogen and stored in foiled-lined bags flushed with nitrogen until use. —

Please replace the paragraph beginning on page 104, line 4 with the following new paragraph:

— The modified boards were removed from the foil-lined bags and fitted with an injection molded sample chamber (cartridge). The chamber was adhered to the board using double-sided sticky tape and had a total volume of 250 microliters. A hybridization solution was prepared. The solution contains 10 nM DNA target (5'-TGTGCAGTTGACGTGGATTGTTAAAAGAGACCATCAATGAGGAAGCTGCA GAATGGGATAGAGTCATCCAGT-3' (SEQ ID NO:5) (D-998), 30 nM signaling probe (D-1055) and 10 nm 5'-TCTACAG(N6)C(N6)ATCTGTGTCCATGGT-3' (SEQ ID NO:6) (N6 is shown in Figure 1D of PCTUS99/01705; it comprises a ferrocene connected by a 4 carbon chain to the 2' oxygen of the ribose of a nucleoside). The signalling probe is as follows:

5'-$(C23)_4$-N87-N87-N87-N87-ATC CAC GTC AAC TGC ACA-3' (SEQ ID NO:7) (D- 1055)

| | | |
C23 C23 C23 C23
C23 C23 C23 C23
C23 C23 C23 C23
C23 C23 C23 C23 —

Please insert the enclosed 2-page text entitled "SEQUENCE LISTING" immediately preceding the claims.